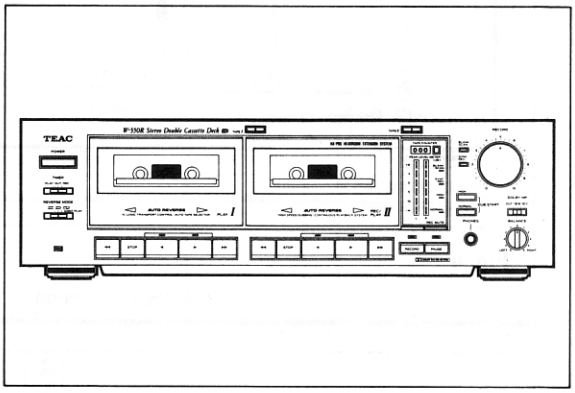
TEAC®

5700116600

# W-550R

## Stereo Double Cassette Deck



OWNER'S MANUAL

Thanks for buying a TEAC. Read this manual carefully to get the best performance from this unit.

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

# SAFETY INSTRUCTIONS

**CAUTION:**

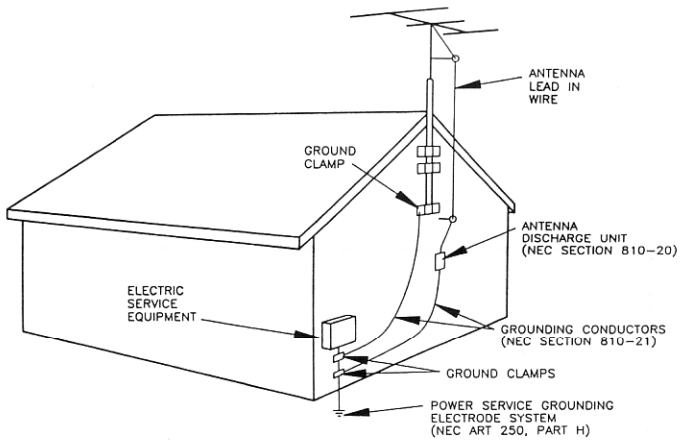
- **Read all of these instructions.**
- **Save these instructions for later use.**
- **Follow all warnings and instructions marked on the audio equipment.**

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Water and Moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. **Carts and Stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power Sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Grounding or Polarization** – The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **Power-Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdoor antenna should be located away from power lines.
15. **Outdoor Antenna Grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70 – 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

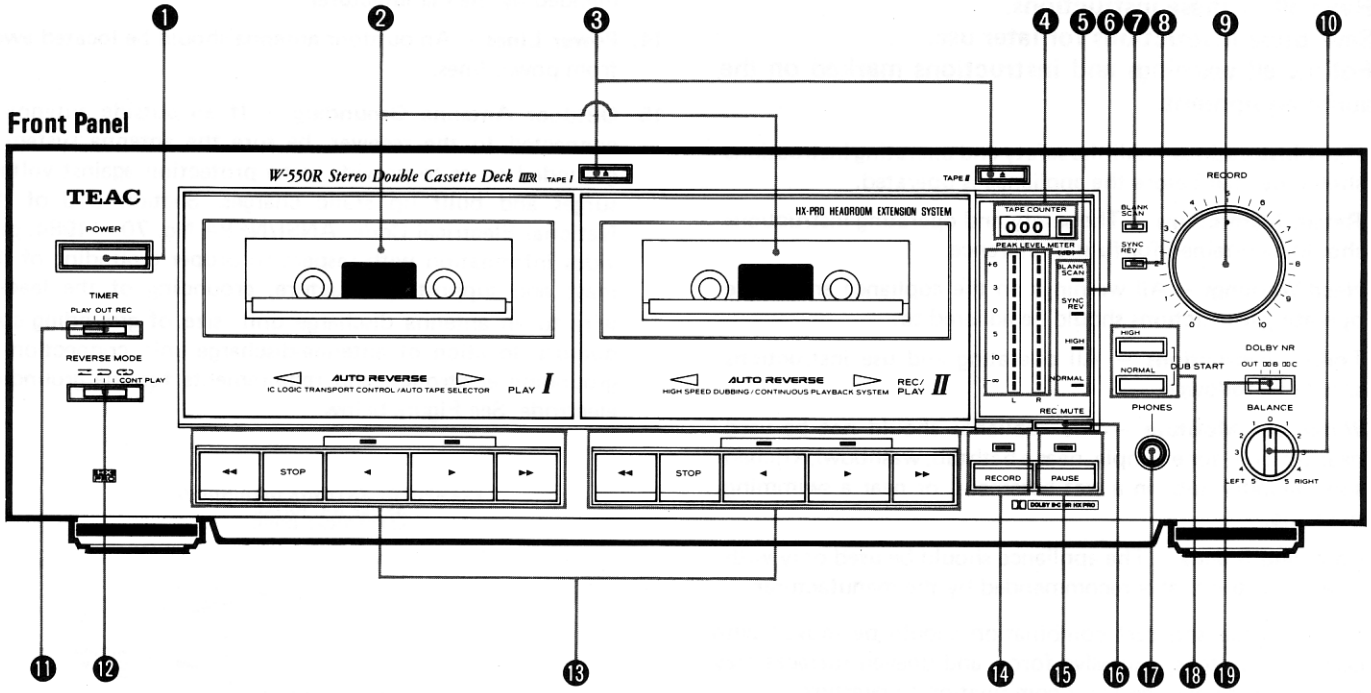
NEC – NATIONAL ELECTRICAL CODE

16. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
17. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
18. **Damage Requiring Service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
19. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

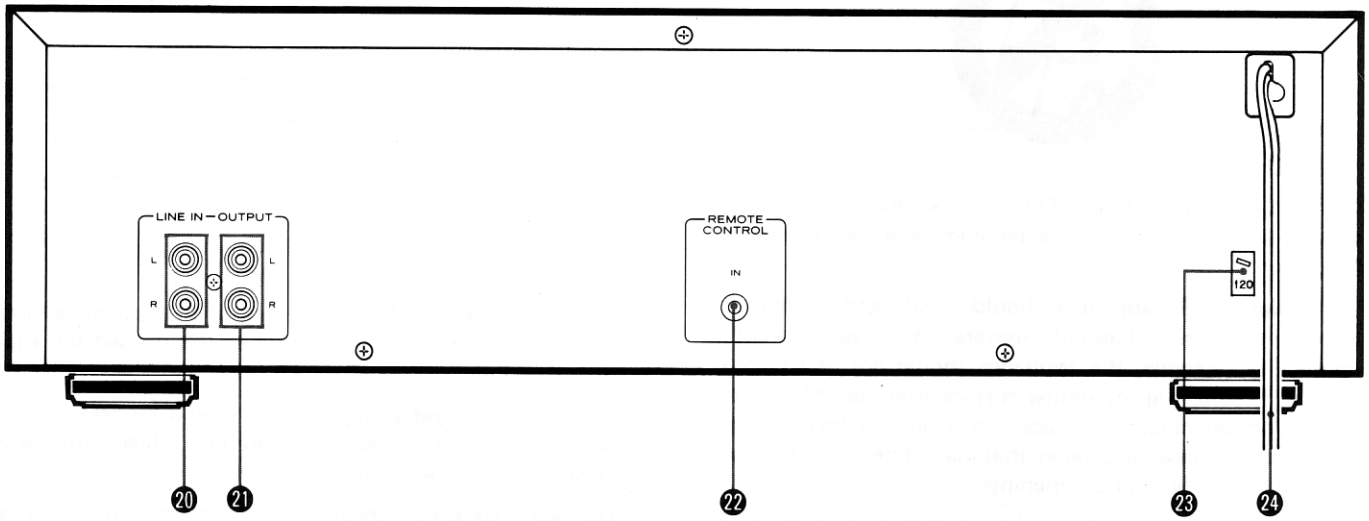
# Reference Illustrations

**Fig. 1**

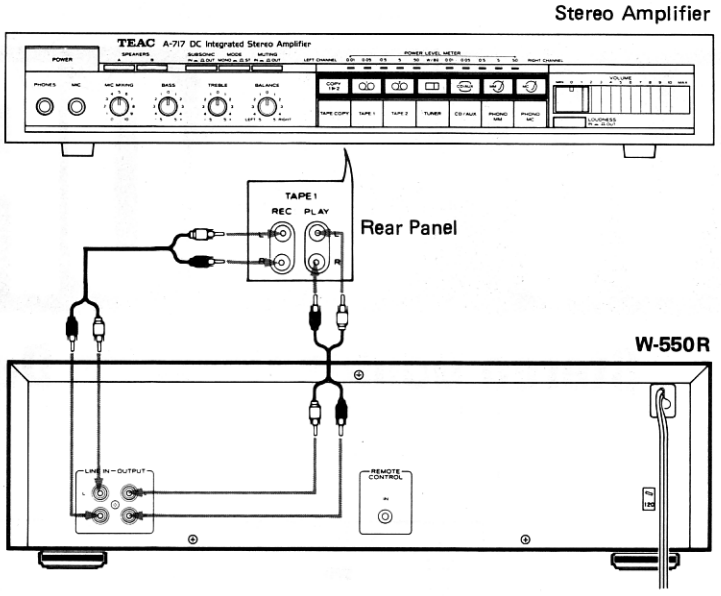
## Front Panel



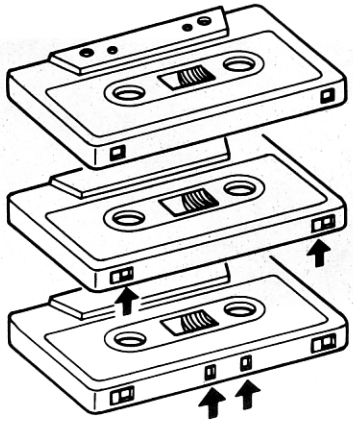

## Rear Panel



## Fig. 2

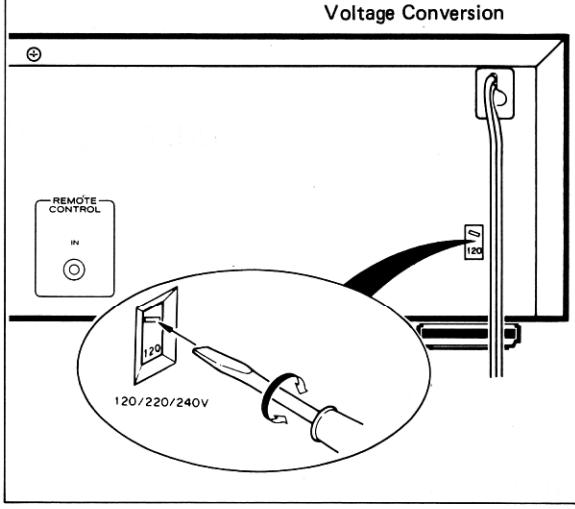



## Fig. 3

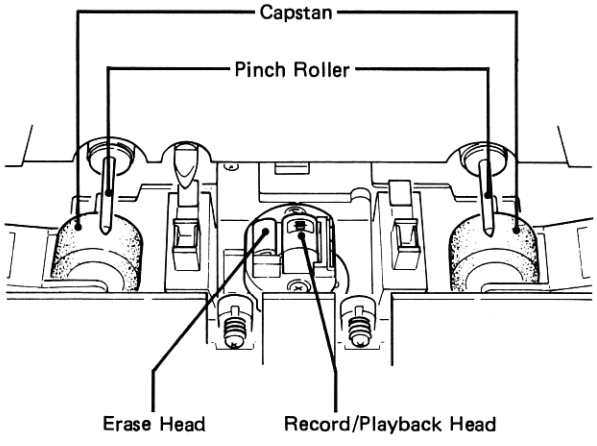



● Tape position identification holes.

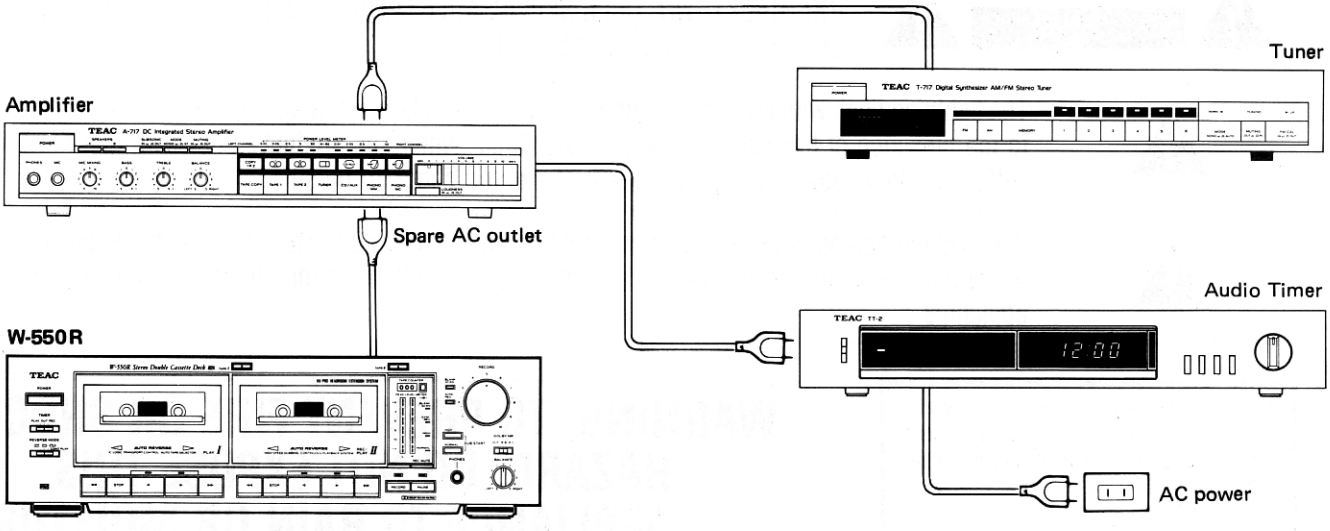
## Fig. 4




## Fig. 5




## Fig. 6



# Precautions

**Environment**
Avoid using the deck in the following circumstances:
- High temperature (such as heater, direct sunlight).
- Extremely low temperature.
- Excessive humidity.
- Dusty atmosphere.
- Where power line voltage fluctuation is severe (the use of a voltage regulator may be advisable).

**Cassette Tape (Fig. 3)**
**Tape Selection:**
For the automatic tape select function to work properly, metal and chrome (cobalt) formula tapes must have tape identification holes.

**Tape Handling:**
Do not store tape in the following places:
- On top of heaters, in direct sunlight or in any other high-temperature areas.
- Near speakers, on TV sets or amplifiers or near any strong magnetic fields.
- High-humidity areas or dirty, dusty areas.

Avoid dropping or subjecting the cassettes to excessive shock.

**Voltage Conversion (For general export models) (Fig. 4)**
If it is necessary to change the voltage requirements of the deck to match your area, use the following procedure:
1. DISCONNECT POWER LINE CORD.
2. Using a screwdriver, turn the selector until the desired voltage marking appears.

**IMPORTANT (for U.K. Customers)**

The wires in this mains lead are coloured in accordance with the following code:

**BLUE: NEUTRAL**
**BROWN: LIVE**

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

**In the U.K, this unit is sold without an AC plug.**

This product is manufactured to comply with the radio interference of EEC directive "82/499/EEC."

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

# Features and Controls (Fig. 1)

## Front Panel

### ❶ POWER Switch
Press to switch the deck on; the bottom LEDs of the peak level meter and the tape running direction indicators of both decks light. Press again to turn the deck off.
**Note:** If you switch the power off, be sure to wait more than 3 seconds before switching the power on again.

The deck draws nominal non-operating power from the AC outlet with its POWER switch in the OFF position.

Obs! nätströmställaren skiljer ej hela apparaten från nätet.

### ❷ Cassette Holder (TAPE I/TAPE II)
The cassette holder can be opened by pressing the Eject button; insert the cassette with the edge where the tape is exposed down. TAPE I is for playback only and TAPE II for recording and playback.

### ❸ Eject Button (TAPE I/TAPE II)
Press in the stop mode to open the cassette holder. Cassette holder cannot be opened during recording or playback.
**Note:** If the power has been switched off during play or recording, ejecting the cassette may be impossible. In such a case, switch the power on and press the Eject button again.

### ❹ TAPE COUNTER and Reset Button (TAPE II only)
This counter shows the relative position of the tape loaded in TAPE II. Pressing the reset button resets the counter to "000".

### ❺ PEAK LEVEL METER
This indicator shows the peak levels of the signals of left (L) and right (R) channels separately. In the record mode, it shows the level of signal from the LINE IN jacks on the rear panel which can be adjusted with the RECORD level control. In the play mode, the meter indicates the level of the signal recorded on the tape.
**Note:** Even during a no-signal passage, the bottom LEDs will remain lit as long as the power is on.

### ❻ Operation Indicators
**BLANK SCAN:** Lights when the Blank Scan function is engaged.
**SYNC REV:** Lights when the Synchro Reverse function is engaged.
**HIGH:** Lights when high-speed dubbing is engaged.
**NORMAL:** Lights when normal-speed dubbing is engaged.

### ❼ BLANK SCAN Button
(Usable for TAPE I)
With this button engaged (the indicator lights), when a blank portion of more than 10 seconds is detected, the tape is fast forwarded to the beginning of the next tune, at which point playback resumes. When it is pressed again, the function is released (the indicator goes out). (See page 8.)

### ❽ SYNC REV (Reverse) Button
The Synchro Reverse feature reverses the tapes in both decks simultaneously during dubbing. When the synchro reverse function is engaged, the "SYNC REV" indicator lights.
See "Synchro Reverse Dubbing" on page 8.

### ❾ RECORD Level Control (TAPE II only)
Use to adjust the levels of the signals input to the LINE IN jacks on the rear panel; both L-channel and R-channel are adjusted simultaneously. This control has no effect when dubbing from TAPE I to TAPE II.

### ❿ BALANCE Control (TAPE II only)
Adjust the balance of the input signals between the left and right channels for recording on TAPE II.

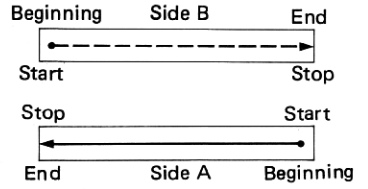
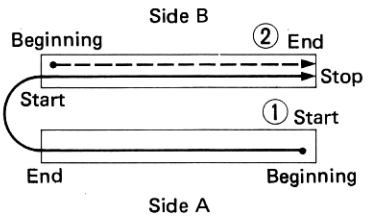
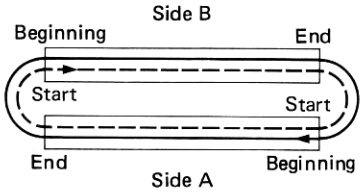
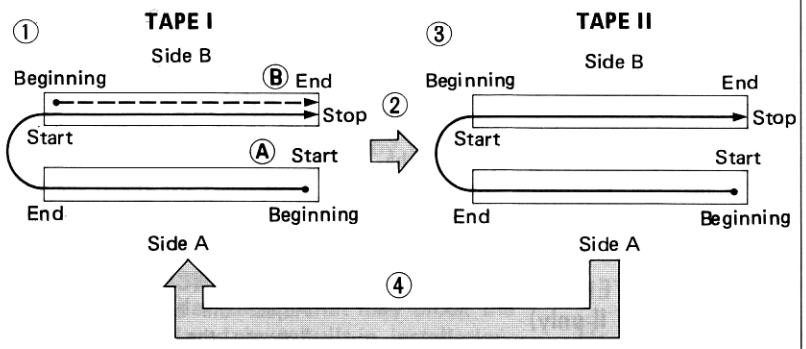
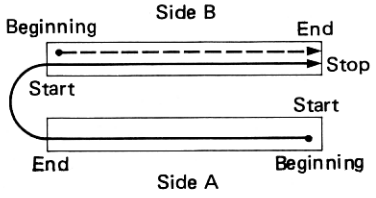
### ⓫ TIMER Switch
**PLAY:** Set to this position for timer playback.
**OUT:** Set to this position when the timer function is not required.
**REC:** Set to this position for timer recording with TAPE II.
(See page 9.)

### ⓬ REVERSE MODE Switch
The setting of this switch determines how the deck operates during playback or recording when the tape reaches the end. See the table "Tape Travel Depending on Setting of REVERSE MODE Switch". This function also works in the same way during dubbing and when using the Blank Scan facility (TAPE I only). See box "Auto Reverse Mechanism" on the next page.

# Connections (Fig. 2)

- Turn off power for all equipment before making connections.
- Read instructions for each component you intend to use with the deck.
- For the connection of the REMOTE CONTROL jack, refer to the owner's manual of the component to which the W-550R is to be connected.

## Tape Travel Depending on Setting of REVERSE MODE Switch

| Setting | Tape Travel |
|---|---|
| ⇄ |  When the tape reaches the end, playback or recording is released. |
| ⇉ |  ① During forward play or recording, when the end of tape is reached, the direction of tape running is reversed to play or record in the opposite direction. Reverse play or recording will continue to the end of the other side, at which point play or recording is released.<br>② During reverse play or recording, when the tape reaches the end, play or recording is released. |
| ⇄ | **PLAY mode (Tape loaded in TAPE I or II)**<br>  During either forward or reverse play, when the end of tape is reached, the direction of tape running is reversed and play continues in the opposite direction. In this way, the two sides of the tape are played back continuously; the tape will stop after 5 cycles. |
| ⇄ | **PLAY mode (Tapes loaded in TAPE I and II)**<br>**– CONT PLAY (Continuous Playback) –**<br>  ①Ⓐ When the tape starts playing in the forward direction, at the end of tape, the tape is reversed to play the other side. At the end of this side, playback is released.<br>Ⓑ When the tape starts playing in the reverse direction, at the end of tape, TAPE I is released.<br>② Control is transferred to TAPE II.<br>③ Playback starts in the forward direction; at the end of tape, it is reversed and the other side is played back.<br>④ At the end of tape, control is then transferred back to TAPE I, which plays both sides.<br>This loop ① – ④ is repeated for 5 cycles. |
| | **RECORD mode (TAPE II only)**<br>  • Operation is same as ⇉. |

### Auto Reverse Mechanism

The auto reverse function uses TEAC's newly-developed Super A.R.H.S. (Acculign Rotating Head System) and a special I.R. (infrared) Combination Tape Sensor. This head rotating system rotates the record/playback head at exactly the same time that the direction of tape travel is reversed to the reverse play or record mode. With this new system, the user doesn't have to be concerned about a level difference between sides A and B. When the leader tape is detected during playback or recording, the I.R. Combination Tape Sensor send a signal to the tape transport control. When this signal is received, this control immediately changes the direction of tape travel to the reverse or forward mode. In the case of a tape without leader tape, the direction of the tape movement will automatically be reversed when the end of tape is reached.

**Notes:**

- The auto reverse function cannot be activated during the first 15 seconds of tape running, even if leader tape is detected.
- If the tape is creased or otherwise damaged, or the head unit is exposed to strong light, the tape direction may be reversed before the end of the tape, when the REVERSE MODE switch is set to the "⇉" or "⇄" position.

### ⑬ Tape Operation Buttons (TAPE I/TAPE II)

◄◄: Press to fast wind the tape from right to left.

**STOP:** Press to stop the tape and release any mode other than the pause mode.

►: Press to start the tape in the forward direction. During playback or recording in the forward direction, the indicator above the button lights.

◄: Press to start the tape in the reverse direction. During playback or recording in the reverse direction, the indicator above the button lights.

►►: Press to fast wind the tape from left to right.

### ⑭ RECORD Button and Indicator (TAPE II only)

Press this button to start recording; the indicator above the button lights. While recording, the tape direction indicator (above the ◄ or ► button) shows which side of the tape is being recorded. To change the direction, press the ◄ or ► button.

### ⑮ PAUSE Button and Indicator (TAPE II only)
Press to temporarily stop tape travel during recording or playback. In the pause mode, the indicator above the button lights. Press again to restart the tape (the indicator goes out).

### ⑯ REC MUTE Button (TAPE II only)
Press this button during recording to provide about 4 seconds of blank between tunes. The deck will enter the record-pause mode. During the record-muting operation, the indicator above the RECORD button blinks. Press the PAUSE button to start recording again. (See "Record Muting Operation" on the right.)

### ⑰ PHONES Jack
Plug stereo headphones into this jack for private listening or monitoring.

### ⑱ DUB START Button
**HIGH:** Press when quick dubbing (2 times faster) from TAPE I to TAPE II is required.

**NORMAL:** Press for normal-speed dubbing from TAPE I to TAPE II is required.

### ⑲ DOLBY NR Select Switch
**OUT:** Set to this position when you do not want to use the built-in Dolby NR system.

**□□ B:** Set to this position when recording or playing back with Dolby B type NR.

**□□ C:** Set to this position when recording or playing back with Dolby C type NR.

## Rear Panel

### ⑳ LINE IN Terminals
Connect the amplifier's REC OUT jacks to these jacks.

### ㉑ OUTPUT Terminals
Connect the amplifier's TAPE PLAY or LINE IN jacks to these jacks.

### ㉒ UR (Unified Remote Control) REMOTE CONTROL Terminal
This terminal is used to link TEAC components with a "UR" mark which will be released in the future.

### ㉓ Voltage Selector (General Export model)
See "Voltage Conversion" on page 5.

### ㉔ Power Supply Cord
Insert into an AC wall outlet, etc. The voltage required by this unit is shown on the rear panel.

## Playback with TAPE I or TAPE II

1. Check that the TIMER switch is OUT.
2. Press the POWER switch to ON.
3. Set the REVERSE MODE switch to the required tape travel mode, referring to the chart "Tape Travel Depending on Setting of REVERSE MODE Switch" on page 6.
4. Load a pre-recorded cassette in TAPE I or II.
5. Select the desired DOLBY NR system.
6. Press the ◄ or ► button for TAPE I or II to start playback.
7. Adjust the volume with the amplifier's volume control.

• To stop playback, press the STOP button.

## Priority of TAPE I and TAPE II

When either deck is being operated for playback or recording, operations of the other deck apart from fast-forwarding or rewinding cannot be engaged.

## Continuous Playback

1. Load pre-recorded cassettes in TAPE I and TAPE II.
2. Set the necessary controls and switches except the ◄ or ► button, referring to "Playback with TAPE I or TAPE II" above.
3. Set the REVERSE MODE switch to the CONT PLAY (⊂⊃) position.
4. Press the ◄ or ► button on the deck to be played back first.
5. Tapes will be played back continuously, according to the condition illustrated in the table "Tape Travel Depending on Setting of REVERSE MODE Switch" on page 6.

• Continuous play will be released automatically after 5 cycles.
• To stop continuous play before 5 cycles, press the STOP button of either deck.

## Recording with TAPE II

**Recording from a stereo system:**
1. Set the TIMER switch to OUT.
2. Press the POWER switch to ON.
3. If you want to make a bi-directional recording, set the REVERSE MODE switch to the ⊃ position.
4. Load a recordable cassette in TAPE II.

• Check that the safety tabs on the spine of the cassette are in place. If they are broken, block the holes with adhesive tape.

5. Select the desired DOLBY NR system.
6. Press the PAUSE button (indicator lights), then the RECORD button (indicator lights). The tape direction indicator will light.
7. Adjust the recording level with the RECORD control so that the loudest sound to be recorded just makes the meters briefly reach around the "0 dB" point (for Normal or Chrome tapes) or the "+3 dB" point (for Metal tapes).
8. To adjust the balance of the input signal, use the BALANCE control.
9. Press the PAUSE button again to start recording.

• To stop recording temporarily, press the PAUSE button. To restart the tape, press it again.
• To stop recording, press the STOP button.

## Record Muting Operation (TAPE II only)

1. **Automatic spacing operation for 4-second blanks (during recording)**
   Press the REC MUTE button during recording. The tape movement continues and a blank space of about 4 seconds is recorded (the RECORD indicator blinks). The deck then enters the record-pause mode automatically (both the RECORD and PAUSE indicators light).
   To restart recording, press the PAUSE button (the PAUSE indicator goes off).
2. **Automatic spacing operation for 4-second blanks (during record-pause)**
   In the record-pause mode, pressing the REC MUTE button will initiate the above record-muting operation automatically. The deck then returns to the record-pause mode.
3. **For a blank of more than 4 seconds**
   During recording, hold the REC MUTE button depressed for a longer period. A blank space will be left as long as the button is pressed. Release the button to enter the record-pause mode. To restart recording, press the PAUSE button.
4. **For a blank of less than 4 seconds**
   After pressing the REC MUTE button during recording, press the PAUSE button before the 4-second interval has expired. The deck will stop and enter the record-pause mode at the point at which the PAUSE button is pressed. To restart recording, press the PAUSE button again.

**Note:**
• During record muting operation (while the RECORD indicator is blinking), pressing the REC MUTE button again will release the record muting operation and recording resumes without stopping the tape.

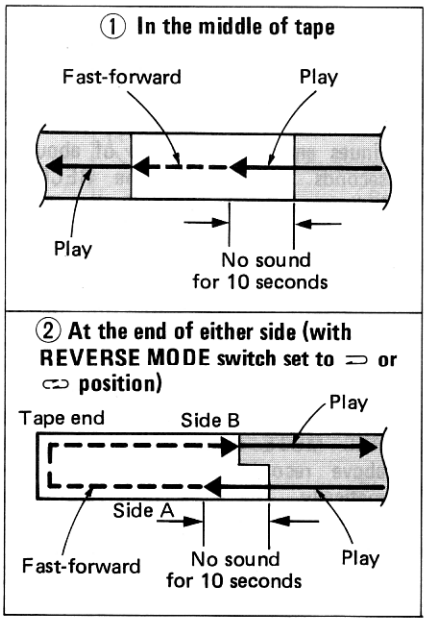
## Erasing

Anything previously recorded on the tape will automatically be erased when you make a new recording on it. It can also be erased by "recording" on it with the RECORD level control set to "0".

## Blank Scan Facility

This facility is provided so that the deck will skip long blank portions during playback of TAPE I.

1. During playback, press the BLANK SCAN button (the indicator lights).
2. If a blank section of more than about 10 seconds is detected during playback, the deck will enter the fast-forward mode automatically until the beginning of the next recorded section is detected, at which point playback will resume.




3. To release blank scan, press the BLANK SCAN button again (the indicator goes off).

**Notes:**

- With the REVERSE MODE switch set to the ⇄ or ⇆ position, when the BLANK SCAN button is engaged, the tape will be fast-forwarded at the end of either side of the tape after running the tape for 10 seconds without any sound. (See the figure ② above.)
- To check if the tape is entirely blank, start blank scan at the beginning of either side with the REVERSE MODE switch set to the ⇆ position.
- If there are sections of tape recorded at a low signal level, because of fading out, etc., these sections may be detected as blank and blank scan may start, in which case the music will be interrupted for about 10 seconds.

## Dubbing (Copying from TAPE I to TAPE II)

### To dub the entire recorded section of a pre-recorded cassette

1. Set the TIMER switch to OUT.
2. Press the POWER switch to ON.
3. Load the pre-recorded cassette into TAPE I and the recordable cassette into TAPE II.
4. Fully rewind both cassettes onto their left reels.
5. Set the REVERSE MODE switch to the desired position.
   ⇄ : Dubbing will be performed for one side only.
   ⇆ : Dubbing will be stopped at the end of reverse side.
6. Set both decks to the ► direction.
7. Press the DUB START HIGH or NORMAL button to start dubbing. The indicator corresponding to the button pressed will light.
   **NORMAL:** Dubbing is performed at normal speed.
   **HIGH:** Dubbing is performed at twice normal speed.
8. The PEAK LEVEL METER indicates the TAPE I signal levels; the recording level of TAPE II will be set automatically (at the same level as TAPE I).
9. After dubbing is completed, both decks stop automatically, according to the setting of the REVERSE MODE button.
10. To stop dubbing, press either of the STOP buttons.

**Notes:**

- The setting of the RECORD level control and DOLBY NR switch will be ignored during dubbing as they have no effect.
- The ◄◄ , ◄ , ► and ►► buttons do not function during NORMAL speed or HIGH speed dubbing. Also, REC MUTE and PAUSE do not function during HIGH speed dubbing.
- The sound quality of the dubbed tape may be slightly worse than that of the origianl tape. For this reason, multi-generation dubbing is not recommended.
- If there is a TV set near the W-550R during high speed dubbing, it is possible that the TV's horizontal scanning frequency (15.75 kHz) may be recorded on the tape. If this occurs or to prevent it in advance, dub at normal speed, switch off the television or keep the deck a reasonable distance away from the TV.

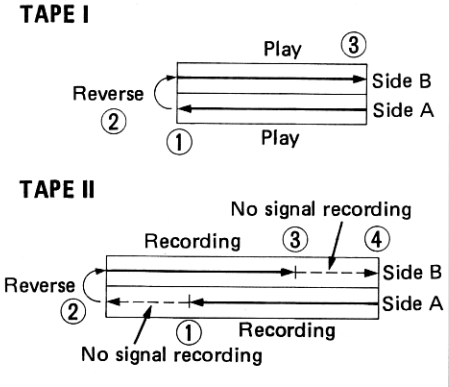
## Synchro Reverse Dubbing

The SYNC REV button allows both decks to be reversed at exactly the same time during dubbing. This function is convenient when using the tapes with different lengths or making a dubbed tape which is completely the same as the original.

1. Set the tape running direction of both decks to the ► (forward) direction, and set the REVERSE MODE switch to the ⇄ position.

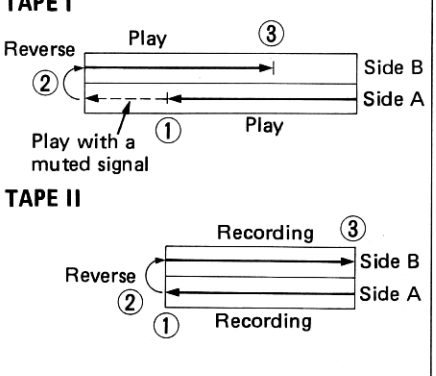
**Synchro Reverse Dubbing Operation**

**TAPE I tape shorter than TAPE II**




① When TAPE I reaches the end of the forward side, TAPE I stops and TAPE II enters the "no signal recording" mode.
② When TAPE II reaches the end, both TAPE I and II are reversed simultaneously then resume reverse play and recording respectively.
③ When TAPE I reaches the end of the reverse side, TAPE I stops and TAPE II enters the "no signal recording" mode.
④ When TAPE II reaches the end, the deck stops.

**TAPE I tape longer than TAPE II**




① When TAPE II reaches the end of forward side, TAPE II enters the record-pause mode for the reverse side, while TAPE I continues playback with a muted signal.
② When TAPE I reaches the end, TAPE I and II start reverse play and recording simultaneously.
③ When TAPE II reaches the end of the reverse side, both TAPE I and II stop simultaneously.

2. Press the SYNC REV button (the corresponding indicator will light).
3. Press either of DUB START buttons (HIGH or NORMAL).
4. The tapes in TAPE I and II travel as illustrated in the chart "Synchro Reverse Dubbing Operation" on page 8.

**Notes:**

- If tapes with different lengths are used, the blank section will be increased. To prevent this, use tapes with the same length as far as possible.
- During high-speed dubbing with the SYNC REV button engaged, when either deck stops at the end of tape, the other deck performs normal-speed running (playback or recording) till the end of tape, at which point both decks are reversed and high-speed dubbing restarts.

### Manuel editing with REC MUTE and PAUSE

During normal-speed dubbing, you can edit the dubbed tape as required using the REC MUTE and PAUSE buttons. For example, you can record only the required tunes on TAPE I to TAPE II bypassing the unwanted tunes.

- During normal-speed dubbing, when the PAUSE button is pressed, TAPE II enters the record-pause mode while TAPE I continues playback. While listening the TAPE I sound, when the portion you want to dub is reached, press the PAUSE button again to restart recording on TAPE II.
- During normal-speed dubbing, when the REC MUTE button is pressed, TAPE II enters the record muting operation as in normal recording. To restart recording on TAPE II, press the PAUSE button.

**CAUTION:**
Recording pre-recorded tapes, records, or other published or broadcast material may infringe copyright laws. Check before recording.

## Timer-Controlled Operation (Fig. 6)

By using the W-550R with an audio timer, tapes can be recorded or played back at any preset time. If tapes are loaded in both decks, you can also start continuous playback in this way.

### Timer Recording (TAPE II only)

**Recording a broadcasting program:**

1. Connect the deck and stereo system to a commercially available audio timer as shown in the diagram.
2. Set the power switches of all components to ON.
3. Load the recordable cassette in TAPE II.
4. Set the REVERSE MODE switch to the required position. (Refer to "Tape Travel Depending on Setting of REVERSE MODE Switch" on page 6.)
5. Set the TIMER switch to the REC position.
6. Tune to the broadcasting station to be recorded.
7. Press PAUSE then RECORD to set the deck to the record-pause mode.
8. Adjust the recording level with the RECORD control as in normal recording.
9. Set the DOLBY NR switch as desired.
10. Set the tape running direction to start recording using the ◄ or ► button of TAPE II.
11. Set the audio timer to the required start (power on) and stop (power off) times. When this setting is completed, the power to all components will be switched off.

When the preset start time is reached, power will be supplied and recording will start automatically.

### Timer Playback

1. Connect the deck and stereo system to a commercially available audio timer as shown in the diagram.
2. Set the power switches of all components to ON.
3. Load pre-recorded cassette(s) in TAPE I or II (or both).
4. Set the REVERSE MODE switch to the required position. (Refer to "Tape Travel Depending on Setting of REVERSE MODE Switch" on page 6.)
5. Set the TIMER switch to the PLAY position.
6. Set the DOLBY NR switch as desired.
7. Set the tape running direction to start playback using the ◄ or ► button.
8. Set the audio timer to the required start (power on) and stop (power off) times. When this setting is completed, the power to all components will be switched off.

When the preset start time is reached, power will be supplied and playback will start automatically.

**Notes:**

- The tape running direction just before the power is turned off will be maintained when the power is turned on again. Remember this when setting for timer controlled operation.
- When cassettes are loaded in both decks, TAPE I will start playback because it has priority.
- When cassettes are loaded in both decks with the REVERSE MODE switch set to CONT PLAY position, the tape in TAPE II will always start playback in the forward direction in continuous play.
- Be sure to set the TIMER switch to the OUT position after timer operation is completed.

## Maintenance (Fig. 5)

The heads and tape path should be cleaned and demagnetized periodically.

**Cleaning Tape Path**

- Apply head cleaning fluid* to special cotton swabs or a soft cloth, and lightly rub the heads, capstans and all metal parts in the tape path.
- Also clean the pinch rollers using rubber cleaning fluid*.

* Both are available in TEAC HC-1 and RC-1 in the U.S.A. or TEAC TZ-261 Tape Recorder Cleaning Kit in other areas.

**Demagnetizing Heads**

Be sure that the power is off, then demagnetize the heads using a TEAC E-3 demagnetizer or equivalent. For details of its use, read its instructions.

## Troubleshooting

Basic troubleshooting of a cassette tape deck is similar to troubleshooting any other electrical or electronic equipment. Always check the most obvious possible causes first. To give you a few ideas of what to look for, check the following:

- No power: Is the power cord connected?
- Tape begins running when power is turned on: Is the TIMER function on?
- No audio output: Are all connections properly made?
- Degraded sound quality: Are the heads dirty or magnetized? Are you using good quality tape? Is the proper NR System selected?
- Unable to select record mode: Are the record protection tabs on the tape in place?

## DOLBY HX PRO

Dolby HX Pro is an "active bias" technique that can improve the quality of audio tape recordings. High-level high frequencies can be recorded more accurately, without sacrificing signal-to-noise ratio, while such side effects of tape saturation as distortion are reduced.

**What Is Bias?**

Bias is a very high-frequency signal generated within a tape deck and recorded on the tape simultaneously with the program

material. This inaudible signal allows a low noise, low distortion recording and flat frequency response. Different magnetic tape formulations require different amounts of bias for optimum performance. If the bias level is too high, high-frequency Maximum Output Level (MOL) decreases.

**The Problem of Self-Bias**

Unfortunately, bias level is often influenced by the signal being recorded. The high frequencies contained in some music act as bias. This unpredictable source of bias is added to the existing bias, resulting in a loss of high-frequency response. As the high-frequency content of the signal increases, the ability of the recorder to record high frequencies (MOL) decreases. This phenomenon is called self-biasing.

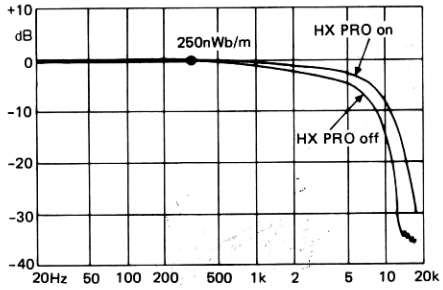
**How Dolby HX Pro Solution**

The Dolby HX Pro monitors the high-frequency content of the program material and adjusts the recorder bias oscillator to maintain a constant total bias level. The result is improved high-frequency response and lower distortion. Depending on the type of tape, the improvement in headroom can be 6 dB or more.

**The Benefits**

With Dolby HX Pro, it is easier to make more accurate recordings of the kind of music which contains high-level high frequencies. The improvement is similar to that of high-performance tape over conventional tape, so regardless of the type of tape used, the results will sound better.

Most important of all, Dolby HX Pro requires no decoding process. Once the tape is recorded with it, the improvements will be realized when playing the tape back on any machine.




**Example of improved frequency response using Dolby HX Pro function**

## Specifications

**Track System** 4-Track, 2-Channel Stereo
**Heads** 3:1 Playback (Rotary, Deck I)
1 Erase and 1 Record/Playback (Rotary, Deck II)
**Type of Tape** Cassette tape C-60 and C-90 (Philips type)
**Tape Speed** 4.76 cm/sec (1-7/8 ips), 9.5 cm/sec (3-3/4 ips) (High speed dubbing only)
**Motors 4;** 2 DC servo motors and 2 DC motors
**Wow and Flutter (WRMS)** 0.06 %
**Frequency Response (Overall, -20 dB)**
25 – 19,000 Hz, Metal
25 – 18,000 Hz, $CrO_2$
25 – 17,000 Hz, Normal
**Signal-to-Noise Ratio (Overall)**
59 dB ( 3 % THD level, Weighted)
69 dB (Dolby B NR In, over 5 kHz)
79 dB (Dolby C NR In, over 1 kHz)
**Fast Winding Time** Approximately 120 seconds for C-60
**Line Input** 87 mV, 50k ohms
**Output** Line: 0.43 V for load impedance of 50k ohms or more
Headphones: 8 ohms
**Power Requirements** 100/120/220/240 V AC, 50/60 Hz (General Export model)
120 V AC, 60 Hz (U.S.A./Canada model)
220 V AC, 50 Hz (Europe model)
240 V AC, 50 Hz (U.K./Australia model)
**Power Consumption** 21 W
**Dimensions (W x H x D)**
435 x 127 x 283 mm (17-1/8" x 5" x 11-1/8")
**Weight (net)** 5.0 kg (11 lbs.)
**Standard Accessories** Input-output connection cords

- Specifications were determined using metal tape except as noted.
- Improvements may result in specification or feature changing without notice.

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